Waldorf®
800 SERIES

Installation and Operation Manual

# 'Fast-Fri' Gas Fryer

FN8120G FNL8120G
FN8226G FNL8226G
FN8130G FNL8130G

Date Purchased

Serial Number

Dealer

Service Provider

CE

For use in GB

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## Introduction

We are confident that you will be delighted with your Waldorf 'Fast Fri' Gas Fryer, and it will become a most valued appliance in your commercial kitchen.

To ensure you receive the utmost benefit from your new Waldorf 'Fast Fri' Gas Fryer, there are two important things you can do.

**Firstly:**

Please read the instruction book carefully and follow the directions given. The time taken will be well spent.

**Secondly:**

If you are unsure of any aspect of the installation, instructions or performance of your appliance, contact your WALDORF dealer promptly. In many cases a phone call could answer your question.

**CE Only:**

These instructions are only valid if the country code appears on the appliance. If the code does not appear on the appliance, refer to the supplier of this appliance to obtain the technical instructions for adapting the appliance to the conditions for use in that country.

**WARNING:**

**IMPROPER INSTALLATION, ADJUSTMENT, ALTERATION, SERVICE OR MAINTENANCE CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH. READ THE INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS THOROUGHLY BEFORE INSTALLING OR SERVICING THIS APPLIANCE.**

**WARNING:**

**INSTRUCTIONS TO BE FOLLOWED IN THE EVENT THE USER SMELLS GAS ARE TO BE POSTED IN A PROMINENT LOCATION. THIS INFORMATION SHALL BE OBTAINED BY CONSULTING THE LOCAL GAS SUPPLIER.**

**WARNING:**

**GREAT CARE MUST BE TAKEN BY THE OPERATOR TO USE THE EQUIPMENT SAFELY TO GUARD IT AGAINST RISK OF FIRE.**

- **THE APPLIANCE MUST NOT BE LEFT ON UNATTENDED.**
- **IT IS RECOMMENDED THAT A REGULAR INSPECTION IS MADE BY A COMPETENT SERVICEMAN TO ENSURE CORRECT AND SAFE OPERATION OF YOUR APPLIANCE IS MAINTAINED.**
- **DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPOURS OR LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.**
- **DO NOT SPRAY AEROSOLS IN THE VICINITY OF THIS APPLIANCE WHILE IT IS IN OPERATION.**

**CAUTION:**

**This appliance is;**

- **For professional use and is to be used by qualified persons only.**
- **Only authorised service persons are to carry out installation, servicing and gas conversion operations.**
- **Components having adjustments protected (e.g. paint sealed) by the manufacturer should not be adjusted by the user / operator.**
- **DO NOT operate the appliance without the legs supplied fitted.**

## Model Numbers Covered in this Specification

**FN**[1]**8120G 'FAST FRI' GAS FRYER (Single Tank - 20 Ltr)**
**FN**[1]**8226G 'FAST FRI' GAS FRYER (Twin Tank - 26 Ltr)**
**FN**[1]**8130G 'FAST FRI' GAS FRYER (Single Tank - 31 Ltr)**

**NOTE: [1]: - - Standard Back Models.**
**L - Low Back Models.**

## General

A commercial heavy duty, gas fired Fryer having a fast fry infra red burner system which gives an intense even heat through the tank.
It is available in 3 model types. All model types are fitted with dual main burners and pilot burners, with the single tank models fitted with a single gas controller which controls both pilot and main burners, where the twin tank model is fitted with twin gas controllers which work independently for each burner.
These Fryers feature an Over Temperature Safety Cut Out system with Full Flame Failure Safety Controls.
State of the art gas controls with snap action thermostat sensitive to changes in oil temperature which improves both recovery and output.
An open tank design for both single and twin tank units to make cleaning a simple and easy task.

## Optional Accessories

This appliance can be fitted with the following optional accessories, (refer to the 'Replacement Parts List' for details).

- Plinth Kit.

## Gas Supply Requirements

**- Australia / New Zealand Only:**

| | Natural Gas | LP Gas (Propane) |
|---|---|---|
| **Input Rating (N.H.G.C.)** | 90MJ/hr (85,300Btu/hr) | 90MJ/hr (85,300Btu/hr) |
| **Supply Pressure** | 1.13 - 2.00kPa (4.5" - 8.0" w.c.) | 2.75 - 3.00kPa (11" - 12" w.c.) |
| **Burner Operating Pressure** | 0.98kPa (*) (3.9" w.c.) | 2.50kPa (*) (10.0" w.c.) |
| **Gas Connection** | ¾" BSP Male | |

**- UK Only:**

| | Natural Gas (G20) | Propane (G31) |
|---|---|---|
| **Heat Input (nett)** | 22.5kW | 22.5kW |
| **Gas Rate** | 2.26 $m^3$/hr | 1.75kg/hr |
| **Supply Pressure** | 20mbar | 37mbar |
| **Burner Operating Pressure** | 9.8mbar (*) | 25mbar (*) |
| **Gas Connection** | $^3/_4$" BSP Male | |

**NOTE: (*) The burner operating pressure is to be measured at the lower test point (Out) on the gas control valve located behind the access door and through the access hole in the control panel, this is to be carried out with all burners operating at the 'High Flame' setting. Refer to the 'Gas Conversion and Specification' Section for further details.**

## Gas Connection

### Non UK Models only:

**FN**(L)**8120G**

Gas supply connection point is located 151 mm from the left hand side, 36 mm from the rear and 124 mm from the floor and is entered from beneath the appliance. An optional rear entry connection is available.

**FN**(L)**8226G**

Gas supply connection point is located 151 mm from the left hand side, 36 mm from the rear and 124 mm from the floor and is entered from beneath the appliance. An optional rear entry connection is available.

**FN**(L)**8130G**

Gas supply connection point is located 300 mm from the left hand side, 36 mm from the rear and 124 mm from the floor and is entered from beneath the appliance. An optional rear entry connection is available.

### UK Models Only:

**FN**(L)**8120G**

Gas supply connection point is located 189 mm from the right hand side and 525 mm from the floor and is entered from the rear of the appliance. An optional lower entry connection is available.

**FN**(L)**8226G**

Gas supply connection point is located 189 mm from the right hand side and 525 mm from the floor and is entered from the rear of the appliance. An optional lower entry connection is available.

**FN**(L)**8130G**

Gas supply connection point is located 189 mm from the right hand side and 525 mm from the floor and is entered from the rear of the appliance. An optional lower entry connection is available.

For all Appliance Options, gas connection is $^{3}/_{4}$" BSP male.

**Flexible Hose Connection**

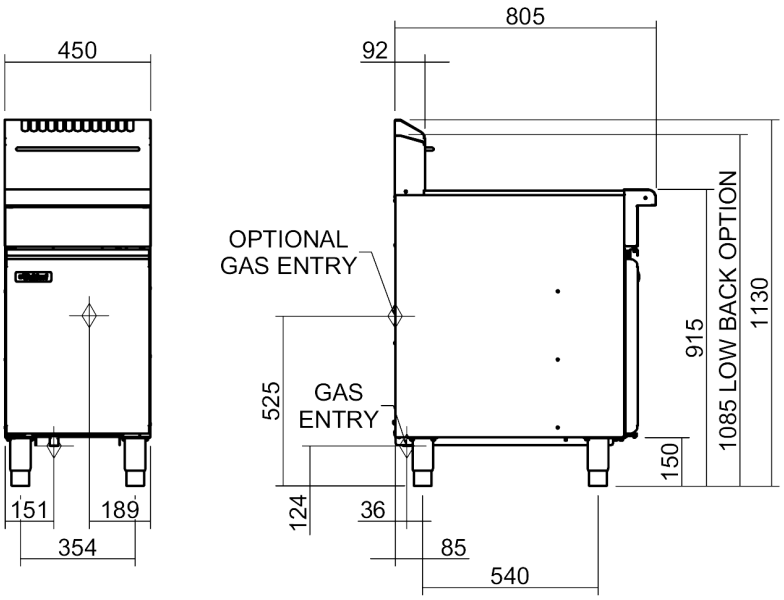
If a Gas Hose assembly is used to connect this appliance, the hose and all fittings must have a minimum ¾" (Natural Gas) or ½" (LPG) inside bore diameter to ensure gas flow rate capacity required by this appliance is achieved.
This must be verified by the operating pressure testing at the maximum gas supply demand condition.

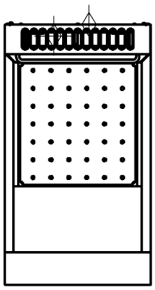
The Gas Hose assembly should also be classified for use in the commercial kitchen conditions that the appliance will be used in.

Recommended Gas Hose Assembly Specification:
- AS/NZS 1869 Class B or D compliant or equivalent, that meets the following requirements:-

| Class | Max Working Pressure at 23 ± 2°C | Working Temperature Range | Resistance to Oil |
|---|---|---|---|
| **B** | 7.0 kPa | - 20°C to + 125°C | Oil resistant lining and cover. |
| **D** | 2.6 MPa | | |

## FN(L)8120G



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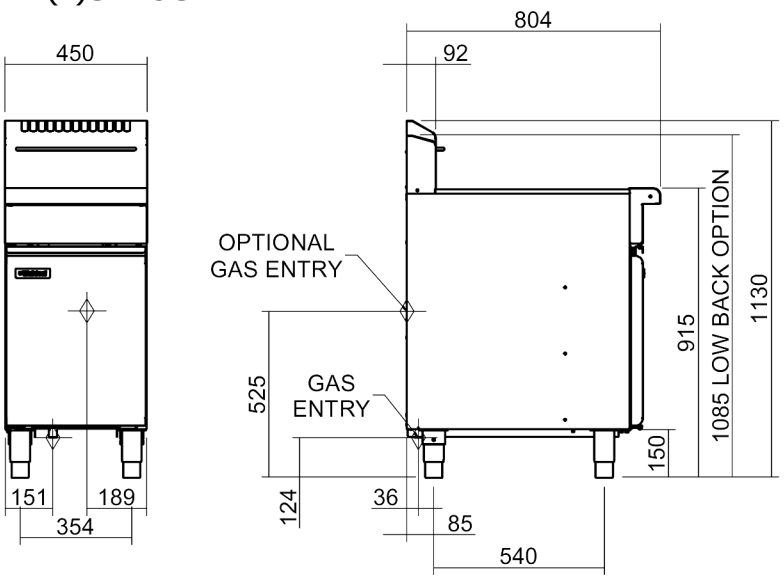
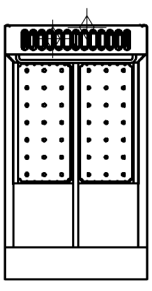
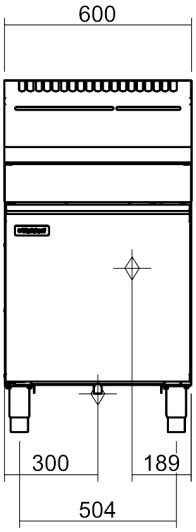
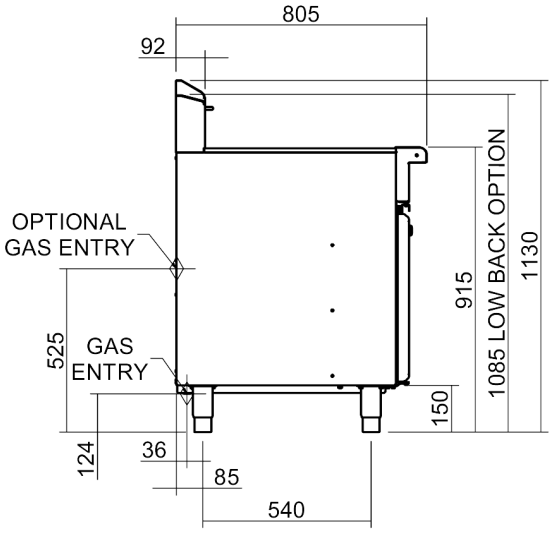


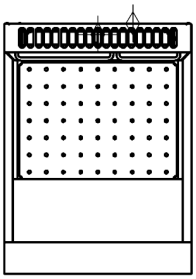



## Dimensions

**FN**(L)**8130G**



## Installation Requirements

**NOTE:**

- **It is most important that this appliance is installed correctly and that operation is correct before use. Installation shall comply with local, gas, health and safety requirements.**
- **This appliance shall be installed with sufficient ventilation to prevent the occurrence of unacceptable concentrations of health harmful substances in the room, the appliance is installed in.**

Waldorf 'FAST FRI' Gas Fryers are designed to provide years of satisfactory service and correct installation is essential to achieve the best performance, efficiency and trouble-free operation.

This appliance must be installed in accordance with National installation codes and in addition, in accordance with relevant National / Local codes covering gas and fire safety.

| | | |
|---|---|---|
| **Australia:** | AS 5601 | - Gas Installations. |
| **New Zealand:** | NZS 5261 | - Gas Installation. |
| **United Kingdom:** | Gas Safety (Installation and Use) Regulations 1998. | |
| **Ireland:** | IS 820 | - Non Domestic Gas Installations. |

**Installations must be carried out by qualified service persons only. Failure to install equipment to the relevant codes and manufacturer's specifications shown in this section will void the warranty.**

**Components having adjustments protected (e.g. paint sealed) by manufacturer, are only to be adjusted by an authorised service agent. They are not to be adjusted by the installation person.**

## Unpacking

- Remove all packaging and transit protection from the appliance including all protective plastic coating from the door outer panel and exterior stainless steel panels.
- Check equipment and parts for damage. Report any damage immediately to the carrier and distributor.
- Report any deficiencies to the distributor who supplied the appliance.
- Check that the available gas supply is correct to that shown on the rating plate located on the inside of the access door.
- Check that the following parts have been supplied with the appliance:

| | **FN8120G** | **FN8226G** | **FN8130G** |
|---|---|---|---|
| Baskets | 2 | 2 | 3 |
| Basket Trays | 1 | 2 | 1 |
| Lid | 1 | 1 | 1 |
| Drain Stick | 1 | 1 | 1 |

## Location

1. This appliance must be installed in a suitably ventilated room to prevent dangerous build up of combustion products.
2. Installation must allow for a sufficient flow of fresh air for the combustion air supply.

**Combustion Air Requirements**

| | |
|---|---|
| **Natural Gas** | **24 m³/hr minimum.** |
| **LPG / Propane** | **24 m³/hr minimum.** |

3. Position the appliance in its approximate working position.
4. All air for burner combustion is supplied from underneath the appliance. The legs must always be fitted and no obstructions placed on the underside or around the base of the appliance, as obstructions will cause incorrect operation and / or failure of the appliance.
5. Components having adjustments protected (e.g. paint sealed) by manufacturer are only allowed to be adjusted by an authorised service agent. They are not to be adjusted by the installation person.

**NOTE: Do not obstruct or block the appliances flue. Never directly connect a ventilation system to the appliance flue outlet.**

## Clearances

**NOTE:**

- **Only non-combustible materials can be used in close proximity to this appliance.**
- **In order to facilitate easy operation, drainage and servicing of the appliance, a minimum of 600 mm clearance should be maintained at the front of the appliance.**

Any gas burning appliance requires adequate clearance and ventilation for optimum and trouble-free operation. The following minimum installation clearances are to be adhered to:

| | Combustible Surface | Non Combustible Surface |
|---|---|---|
| Left / Right hand side. | 50 mm. | 0 mm. |
| Rear. | 50 mm. | 0 mm. |

## Assembly

This model is delivered completely assembled. Ensure that the legs are securely attached.

**NOTE:**

- **This appliance is fitted with adjustable feet to enable it to be positioned securely and level on uneven floors. This should be carried out on completion of the gas connection. Refer to the 'Gas Connection Section'.**

- **This appliance can also be fitted with rear rollers to enable the appliance to be easily moved for positioning and cleaning purposes. If desired, these rollers are supplied in the packaging, with the appliance. See below for fitting instructions.**

**Optional Accessories (Refer to Replacement Parts List)**

- Plinth Kit. For installation details, refer to the instructions supplied with each kit.

- The appliance rear leg housings can be fitted with:-

  Adjustable feet to assist with levelling of the appliance on uneven floors.

  Rear rollers to enable the appliance to be easily moved for positioning and cleaning purposes.

**Fitting Rear Rollers.**

1. Raise the appliance from the floor by approx. 75 mm using suitable lifting equipment (i.e. Palletiser / Forklift) to allow the rear adjustable feet to be removed.
2. Unscrew and remove both the rear adjustable feet from the rear leg housings.
3. Fit the rear roller to the rear leg housing and align the screw hole in the side of the rear leg housing with the threaded hole in the rear roller.
4. Secure the rear roller to the leg support with the bolt supplied and tighten the bolt using a 10 mm A/F spanner.
5. Fit the second roller and tighten.
6. Lower the appliance back to the floor and adjust the front adjustable feet to level the appliance.

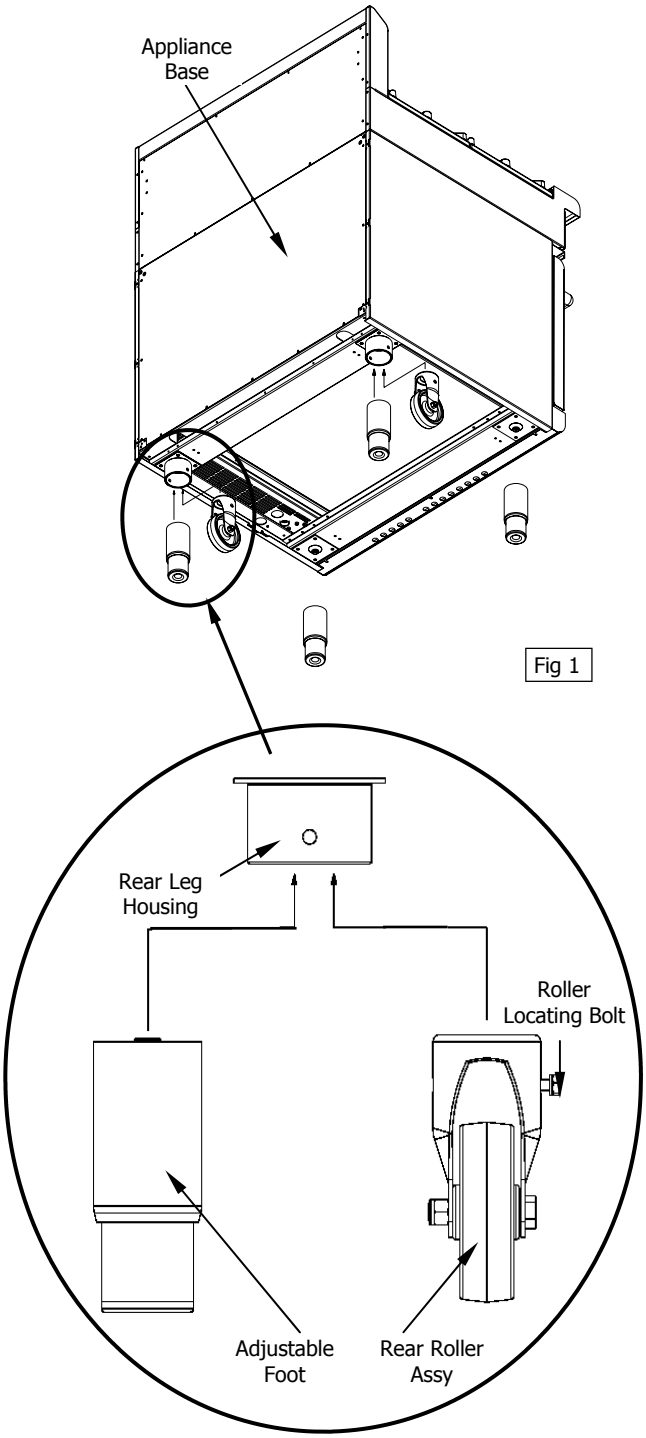



Fig 1

## Gas Connection

**NOTE: ALL GAS FITTING MUST ONLY BE CARRIED OUT BY A QUALIFIED SERVICE PERSON.**

1. Waldorf Fryers do not require an electrical connection, they function totally on the gas supply only.
2. It is essential that the gas supply is correct for the appliance to be installed and that adequate supply pressure and volume are available. The following checks should therefore be made before installation:-
   a. **The Gas Type** the appliance has been supplied for is shown on coloured stickers located above the gas entry point and next to the rating plate. Check that this is correct for the gas supply the appliance is being installed for. The gas conversion procedure is detailed in this manual.
   b. **Supply Pressure** required for this appliance is shown in the 'Specifications' section of this manual. Check the gas supply to ensure that adequate supply pressure exists.
   **c. Input Rate** of this appliance is also stated on the Rating Plate fitted to the inside of the access door and in the 'Specifications' section of this manual. The input rate should be checked against the available gas supply line capacity. **Particular note should be taken if the appliance is being added to an existing installation.**

Fig 1

**NOTE: It is important that adequately sized piping runs directly to the connection joint on the appliance, with as few tees and elbows as possible to give maximum supply volume.**

3. A suitable joining compound which resists the breakdown action of LPG must be used on every gas line connection, unless compression fittings are used.
   The connection to the appliance is $^{3}/_{4}$" BSP male.

**NOTE: A Manual Isolation Valve must be fitted to the individual appliance supply line.**

4. Correctly locate the appliance into its final operating position and using a spirit level, adjust the legs so that the unit is level and at the correct height.
5. Connect the gas supply to the appliance.
6. Check all gas connections for leakages using soapy water or other gas detecting equipment.

**WARNING:**

**DO NOT USE A NAKED FLAME TO CHECK FOR GAS LEAKAGES.**

7. Check the gas supply pressure is as shown in the 'Specifications' section, 'Gas Supply Requirements' table.

**NOTE: The supply pressure is to be measured at the upper test point (Supply Pressure) on the gas control valve located behind the access door and through the access hole in the control panel.**

8. Light the Pilot Burners. Refer to the 'Operation' section, 'Lighting the Pilot Burners'.
9. Check the pilot flame size. Re-adjust if required, using the pilot adjusting screw (See Fig 2 overleaf), and as shown in the 'Gas Conversion and Specifications' section, 'Pilot Burner Flame Adjustment'.

**CAUTION:**

**Ensure that the tank(s) is / are filled with either water or oil prior to starting the Main Burners otherwise damage may be caused to the fryer tank(s).**

10. Light the Main Burners. Refer to the 'Operation' section, 'Lighting the Main Burners'.
11. Verify that the supply pressure is still correct.
12. Check the Main Burner operating pressure (Adjust, using the 'Operating Pressure Adjusting Screw' on the Gas Control Valve, see Fig 2), and as shown in the 'Gas Conversion and Specifications' section, 'Main Burner Operating Pressure Adjustment'.

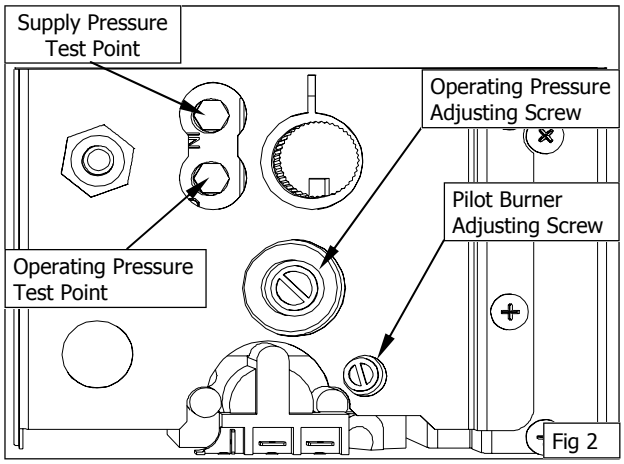


Fig 2

## Commissioning

**The following commissioning checks must be carried out before the fryer is handed over for use, to ensure that the unit operates correctly and the operator(s) understand the correct operating procedure.**

1. Before leaving the new installation;
   a. Check the following functions in accordance with the operating instructions specified in the 'Operation' section of this manual.
      - Light the Pilot Burners.
      - Light the Main Burners.
      - Check the Thermostat Operation (refer to the 'Operation' section of this manual).
      - Turning 'Off' the Fryer.

   b. The thermostat operation check should be carried out by filling the fryer with oil / shortening to the oil 'FILL LEVEL' mark at the rear of the tank (refer to 'Filling the Tank' in the 'Operation Section' of the Manual) and setting the thermostat to 180°C. Light the pilot burners and turn 'On' the main burners in accordance with 'Operation Instructions' found in this manual.
   c. The calibration of the thermostat should be checked once the oil is up to temperature. If a discrepancy is found, the thermostat calibration should be referred to the supplier.
   d. Ensure that each operator has been instructed in the areas of correct lighting, operation, and shutdown procedures for the appliance.

2. This manual must be kept by the owner for future reference and a record of ***Date of Purchase***, ***Date of Installation*** and ***Serial Number of Unit*** recorded and kept with this manual. **(These details can be found on the Rating Plate attached to the inner R/H side of the front access door panel. Refer to Figure 1 in the 'Gas Connection' section).**

**NOTE: If for some reason it is not possible to get the appliance to operate correctly, shut off the gas supply and contact the supplier of this unit.**

## Operation Guide

**CAUTION:**

- **This appliance is for professional use and is only to be used by qualified persons.**
- **Only qualified service persons are to carry out installation, servicing or gas conversion operations.**
- **Components having adjustments protected (e.g. paint sealed) by the manufacturer should not be adjusted by the user / operator.**

1. WALDORF 'FAST-FRI' Gas Fryers have been designed to provide simplicity of operation and 100% safety protection.
2. Improper operation is therefore almost impossible, however bad operation practices can reduce the oil / shortening life and produce a poor quality product. To use this fryer correctly please read the following sections carefully;
   - Filling the Tank.
   - Lighting the Pilot Burners.
   - Lighting the Main Burners.
   - Setting the Operating Temperature.
   - Turning 'Off' the Fryer.
   - Frying Temperature Guide and Care of Oil.
   - Draining and Cleaning.

## Description of Controls

- A commercial heavy duty, gas fired Fryer using a fast fry infra red burner system.
- Available in 3 model types.
- All models are fitted with dual main burners and pilot burners.
- Single tank models fitted with a single gas controller and additional flame failure valve to control both main burners and pilots.
- Twin tank model fitted with twin gas controllers which work independently for each burner.
- Fryers feature an Over Temperature Safety Cut Out system with Full Flame Failure Safety Controls.
- Snap action thermostat sensitive to changes in oil temperature.
- Open tank design for both units to simplify cleaning operation.

**Single Tank FN8120G Controls**

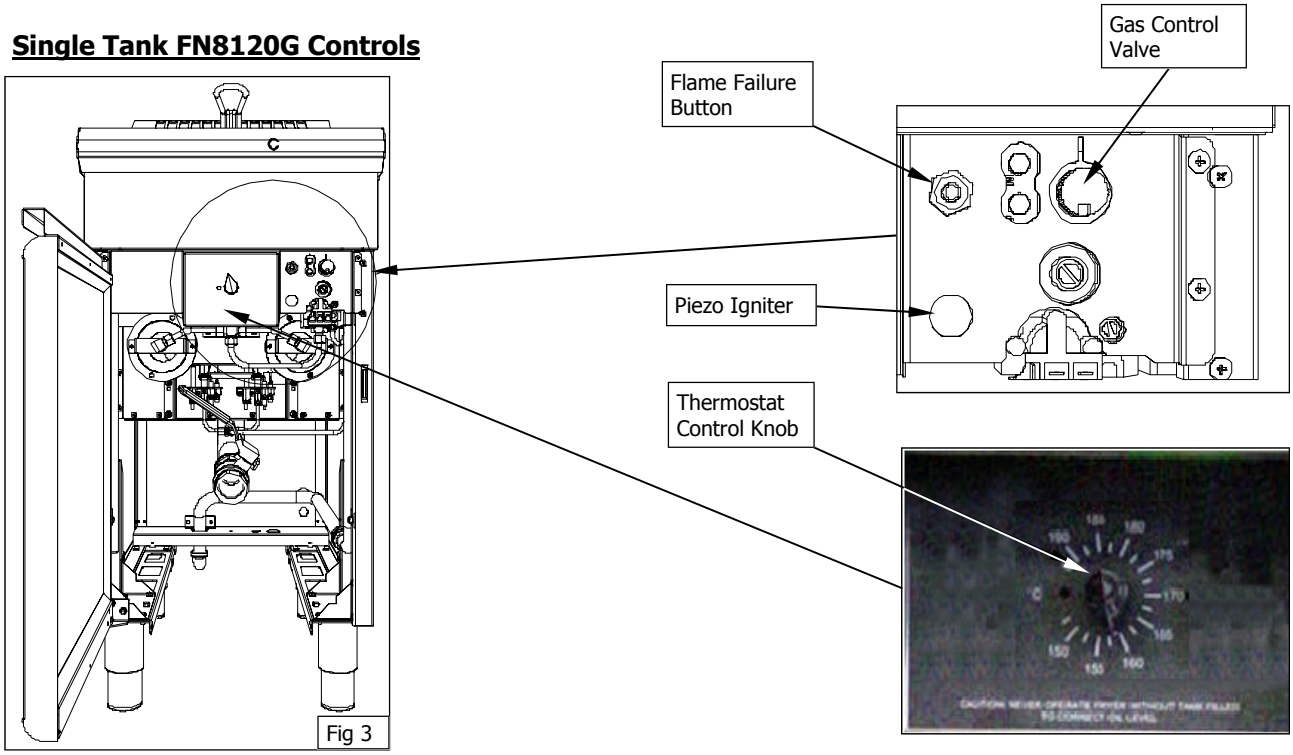



Fig 3

## Twin Tank FN8226G Controls

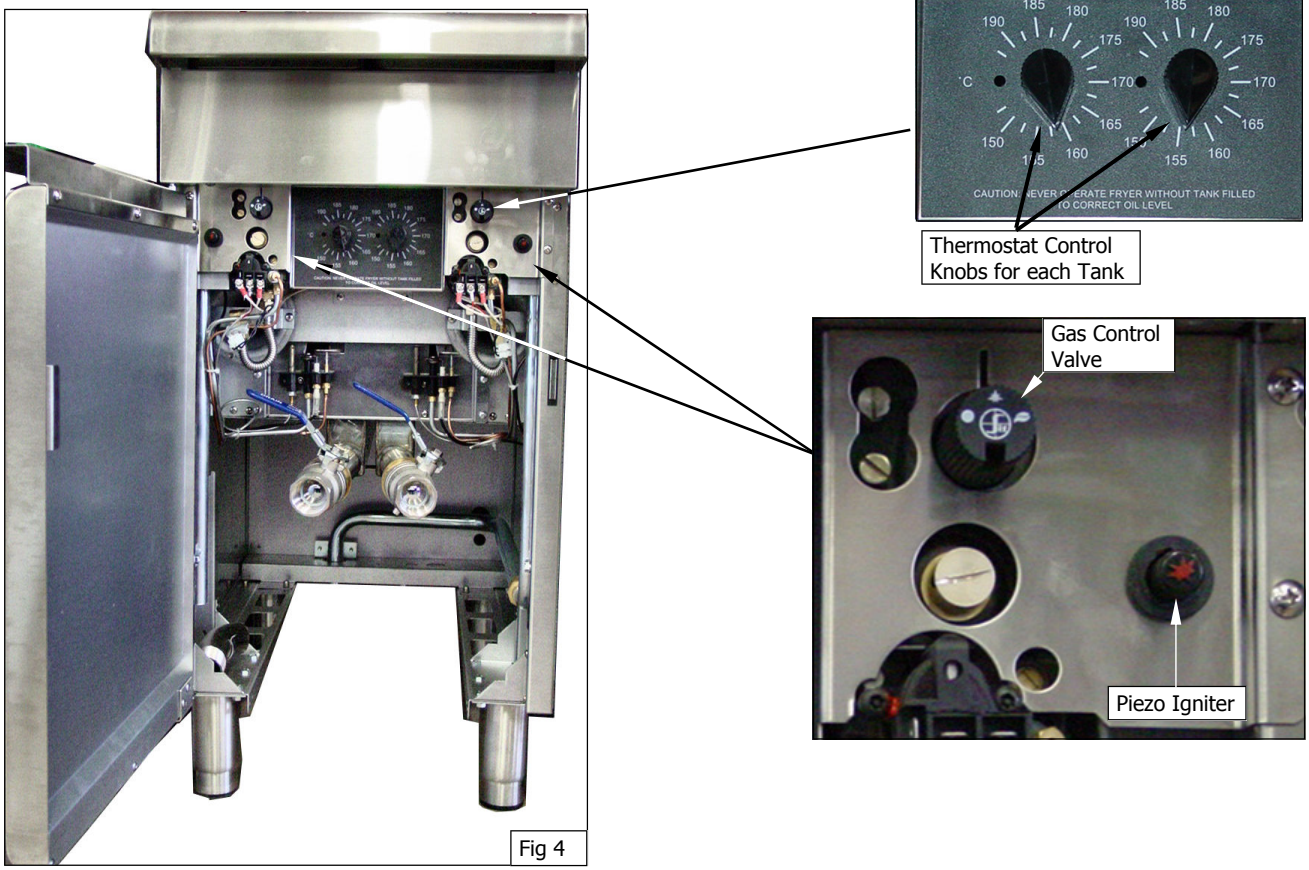



Fig 4

## Single Tank FN8130G Controls

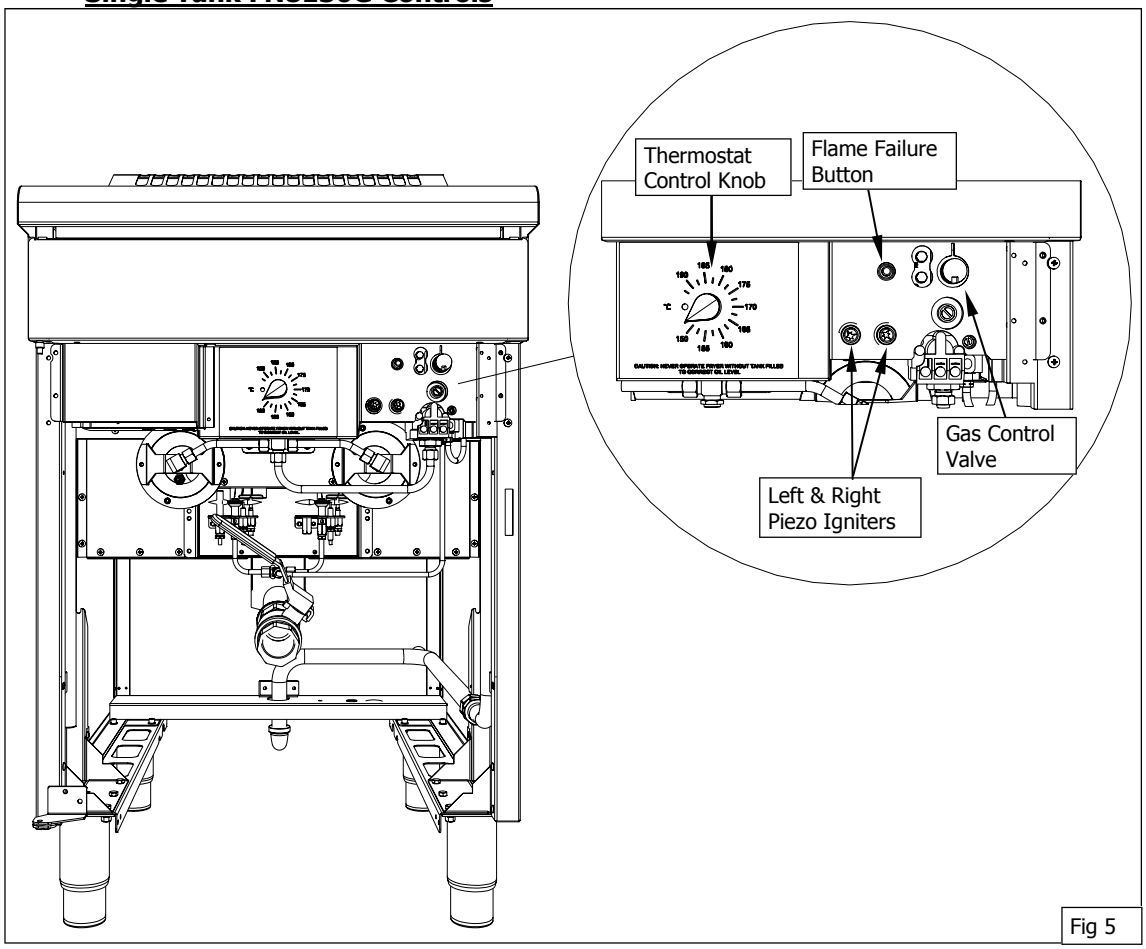



Fig 5

**WARNING:**

**GREAT CARE MUST BE TAKEN BY THE OPERATOR TO USE THE FRYER SAFELY TO GUARD AGAINST THE RISK OF INJURY AND FIRE.**

- **DO NOT LEAVE THE FRYER UN-ATTENDED DURING OPERATION.**
- **DO NOT REPLENISH THE OIL (FRYING MEDIUM) IN THE FRYER WHEN THE FRYER IS HOT.**
- **DO NOT OVER FILL THE OIL (FRYING MEDIUM) IN THE FRYER ABOVE THE TOP LEVEL MARK.**
- **DO NOT ALLOW THE OIL (FRYING MEDIUM) IN THE FRYER TO FALL BELOW THE LOWER LEVEL MARK.**
- **DO NOT ALLOW THE OIL (FRYING MEDIUM) IN THE FRYER TO OVERHEAT.**
- **DO NOT INTRODUCE WET FOOD OR WATER INTO THE HOT OIL (FRYING MEDIUM).**
- **DO NOT USE FLAMMIBLE SOLVENTS AND CLEANING AIDS ON OR IN CLOSE PROXIMITY TO THE FRYER WHILST THE FRYER IS STILL HOT.**

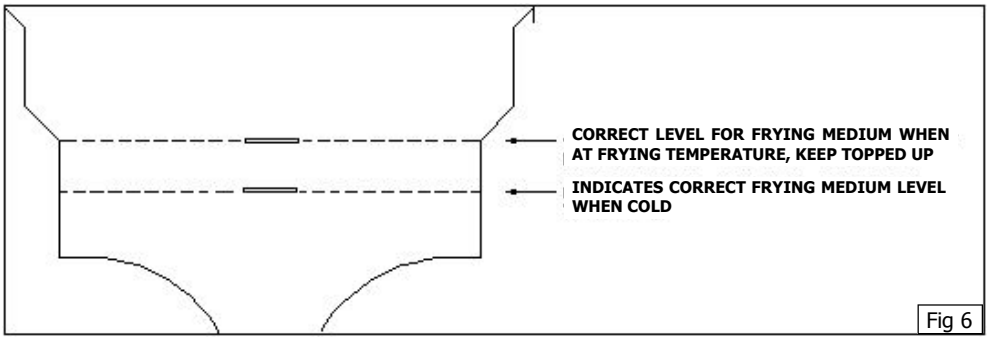
### Before Use

1. Check that the gas supply is turned 'On'.
2. Check that no foreign articles are in the tank.

**WARNING:**

**DANGER OF FIRE EXISTS IF THE OIL LEVEL IS BELOW THE MINIMUM 'LO' INDICATED LEVEL**

### Filling the Tank(s)


CORRECT LEVEL FOR FRYING MEDIUM WHEN AT FRYING TEMPERATURE, KEEP TOPPED UP
INDICATES CORRECT FRYING MEDIUM LEVEL WHEN COLD
Fig 6

**NOTE: WALDORF 'FAST-FRI' fryers can be used with both oil and shortening.**

1. Before filling the tank, always check that the drain valve(s) behind the door is (are) closed. A locking slide is provided on these valves and this should always be locked in position during use.
   a. **OIL** - Carefully fill fryer tank with oil until the 'FILL-LEVEL' mark is reached.
      The FN8120G fryer will hold 20 litres of oil (37 lbs shortening).
      The FN8226G fryer will hold 13 litres of oil per tank (24 lbs shortening per tank).
      The FN8130G fryer will hold 31 litres of oil. (46.5 lbs shortening).
   b. **SHORTENING** - Ideally shortening should be pre-melted prior to putting it into the tank. This is normally done in a suitable vessel on a boiling table burner(s). The liquefied shortening can then be poured into the tank until it reaches the 'FILL LEVEL' mark.
      - When pre-melting shortening, only heat until the shortening is just liquefied. **Do not bring up to high temperature as handling of hot shortening is dangerous**.
      - If pre-melting of shortening is not possible then the shortening should be cut in pieces and packed down into the tank.
      - Bringing the shortening up to frying temperature, when not pre-melting, should be done in two stages.

i. **Pre-Heating**;

Light the main burners and manually cycle the burners 'On' / 'Off' until the shortening has liquefied. Ideally the main burners should be cycled 'On' for 5 seconds and 'Off' for 10 seconds. Following this procedure should allow shortening to liquefy gradually without scorching.

ii. Once the shortening has liquefied, it can be brought up to fryer operating temperature.

**NOTE: Running burners continuously will cause shortening in contact with the tank to overheat, resulting in premature oil breakdown. Never allow the shortening to smoke while melting as this indicates that the temperature is too high. If the shortening starts smoking, increase the 'Off' intervals of the main burners.**

## Lighting the Pilot Burners

**FN8120 Fryer (Single Tank)**

1. With the fryer tank full of frying medium, the pilot burners can be lit.
2. Check that the gas supply is turned on at the mains supply.
3. Open the access door at the front of the appliance to access the control panel.
4. Rotate the gas control knob to the position marked 'PILOT' and hold depressed.
5. At the same time hold the flame failure button depressed.
6. Depress the piezo igniter until the right hand pilot ignites.
7. Continue holding the gas control knob and flame failure button depressed until the left hand pilot cross lights from the right hand pilot.
8. Hold the gas control knob and flame failure button depressed for approx. 10 to 15 seconds after igniting the second pilot burner, then release, both pilot burners should remain alight. If the pilot burners do not ignite, repeat Items 1 to 8 above.

**FN8130 Fryer (Single Tank)**

1. With the fryer tank full of frying medium, the pilot burners can be lit.
2. Check that the gas supply is turned on at the mains supply.
3. Open the access door at the front of the appliance to access the control panel.
4. Rotate the gas control knob to the position marked 'PILOT' and hold depressed.
5. At the same time hold the flame failure button depressed.
6. Depress the right hand piezo igniter until the right hand pilot ignites.
7. Continue holding the gas control knob and flame failure button depressed.
8. Depress the left hand piezo igniter until the left hand pilot ignites.
9. Hold the gas control knob and flame failure button depressed for approx. 10 to 15 seconds after igniting both pilot burners, both pilot burners should remain alight. If the pilot burners do not ignite, repeat Items 1 to 9 above.

**FN8226 Fryer (Twin Tank)**

1. With the fryer tank full of frying medium, the pilot burners can be lit.
2. Check that the gas supply is turned on at the mains supply.
3. Open the access door at the front of the appliance to access the control panel.
4. Rotate the right hand gas control knob to the position marked 'PILOT' and hold depressed.
5. Depress the right hand piezo igniter until the right hand pilot ignites.
6. Continue holding the gas control knob depressed for approx. 10 to 15 seconds after igniting the right hand pilot burner, the pilot burner should remain alight. If the pilot burner does not ignite, repeat Items 1 to 6 above.
7. To ignite the left hand pilot burner, rotate the left hand gas control knob to the position marked 'PILOT' and hold depressed.
8. Depress the left hand piezo igniter until the left hand pilot ignites.
9. Continue holding the gas control knob depressed for approx. 10 to 15 seconds after igniting the left hand pilot burner, the pilot burner should remain alight. If the pilot burner does not ignite, repeat Items 7 to 9 above.

## Lighting the Main Burners

1. Ensure that the pilot burners are alight, by opening the front access door of the appliance and checking that both pilot flames are alight.
2. Depress and rotate the gas control knob to the 'Full Flame' position.
3. The main burners will now ignite automatically off the pilot burners.

**NOTE:**

- **If the main burners are turned on immediately after the pilot burners are lit, a delay of approximately 30 seconds will occur until the thermopile (which provides power to open the main valve) has heated up off the pilot burners.**
- **The main burners will not light if the frying medium temperature is above the thermostat set temperature.**
- **Turning the gas control knob from the 'Pilot' position to the 'Main Burner' position will allow manual cycling of the burners 'On' and 'Off' when melting shortening.**

## Turning 'OFF' the Fryer

### To the 'Pilot' Position

a. Depress and rotate the gas control valve clockwise to the 'Pilot' position.
b. The main burners will extinguish and the 'Pilot' will remain alight.

### To the 'Off' Position

a. Depress and rotate the gas control valve fully clockwise to the 'Off' position.
b. The 'Pilot' burners will extinguish.
c. Rotate the thermostat to the 'O' position.

## Setting the Operating Temperature

1. Rotate the gas control knob to the required temperature.
2. The temperature used for frying food is the most important aspect of fryer operation. Incorrect temperatures will result in poor product quality and will reduce the life of the oil / shortening.
3. WALDORF 'FAST-FRI' fryers feature a thermostat which is accurate to 1°C.
4. The temperature can be set from 145°C to 195°C, although we do not recommend any food to be cooked above 190°C.
5. To set the operating temperature simply turn the thermostat to the desired setting.
6. Main burners will operate automatically to maintain this temperature.
7. In order to obtain the best results with your fryer and the product cooked in it, the following pages detail recommended temperatures and a practical guide to frying. Time spent reading this information will assist in obtaining a cooked product of exceptional quality and taste.
8. As a safety precaution all WALDORF 'FAST-FRI' fryers feature an Over-Heat control which will 'Turn Off' the fryer in the event that the oil reaches over 220°C, should there be a thermostat failure.
9. WALDORF FN8226G 'FAST-FRI' Fryers feature a split tank allowing distinctive products to be cooked in individual pans and at different temperatures. This allows seafood products to be fried separate from French Fries for instance to stop flavour contamination between products and allow products to be cooked at their optimum frying temperature.

**IMPORTANT**

**Should any abnormal operation like;**

**- ignition problems,**

**- abnormal burner flame,**

**- burner control problems,**

**- partial or full loss of burner flame in normal operation, be noticed, the appliance requires IMMEDIATE service by a qualified service person and should not be used until such service is carried out.**

## Frying Guide and Care of Frying Oils and Fats.

1. Prepare the food correctly. Prepare the food in as nearly uniform pieces as possible and bring the food up to room temperature. Ensure that the food is free from excessive moisture and also excessive crumbing when 'breading' is done.
2. Preheat the frying medium to the recommended temperature for the particular food to be cooked and no higher - specially prepared frying mediums are recommended.
3. The frying medium should be at the correct temperature for the food to be cooked before lowering the food into the tank. Avoid heating the frying medium to any higher temperature than is recommended. Also avoid holding the frying medium at the frying temperature when there is no food being cooked. *Any frying medium will break down if held for long periods at frying temperatures*.
4. Lower food gradually into the hot frying medium using a wire basket, until all food pieces are submerged. Avoid overloading the basket, we recommend no more that 900g per basket or 1800g per load. *Overloading will cause temperature to drop so low that a longer frying time will be needed and the foods will become grease soaked and unattractive*. With experience you can determine what amount of food may be added to fryer without causing excessive drop in temperature. If the temperature drop is excessive, either the food is too cold or there is too much food in fryer. Temperatures and cooking times quoted are based on average size batches being used in fryer.
5. Continue cooking until the outside of the food is brown and crisp and the pieces are cooked through.
6. The exact cooking time depends upon the size of the food pieces and upon whether the food has been pre-cooked. When in doubt, test a sample and be sure.
7. Remove the food from the frying medium and allow the food to drain in the basket over the fryer.
8. Conserve the excess frying medium by letting it drain back into the fryer. This draining should not consume much time if the fried food is to be served at its hot, crisp and flavoursome best.
9. Serve the food immediately after frying.
10. Deep fried foods are at their flavour peak as soon as the frying is complete. Serve them within a minute or two after they are taken from the fryer. ***Fried foods should never be held.***

## Frying Temperature Guide and Care of Frying Medium

### Summary of Practical Care of Frying Fats and Oils

Fats and oils are unstable compounds. Even the best oils and fats will break down to some extent in the fryer.

There are a number of causes of frying mediums ceasing to be edible. Heat and moisture are two of the most important causes and we have both heat and moisture in the deep well fryer.

Frying medium is by far the most expensive item of deep well frying equipment, if the following points are carefully observed, the cost of frying can be kept to a minimum:-

a. Select one of the recommend mediums for deep frying (Hydrogenated shortening, high grade lards or salad oils made from peanuts, cottonseed or corn). Know the smoking temperature of the one you select, generally the heat temperate qualities and stability of frying oils, particularly peanut oil, are perhaps greater than that of the solid fats.
b. Avoid burning the medium - either when putting new medium into fryer or during frying, *No food needs a deep well frying temperature higher than 195°C and most foods should be fried around 180°C*.
c. Have rapid 'turnover' of the frying medium. The term 'turnover' means the rate at which fresh medium is added to the old medium in the fryer.
d. Filter the frying medium daily, or more often if necessary, to remove crumbs and other sediment.
e. Clean fryer each time the medium is filtered, to keep it free from gum. Also be sure that all soap and detergent is thoroughly removed from the fryer after cleaning it.
f. Taste the frying medium daily to be sure there is no 'Off' flavour which may be transmitted to other foods.

If these simple precautions are taken consistently, fried foods can always be served at their delicious best. Furthermore, the breakdown of frying medium can be kept at a minimum and the cost of frying operations can be considerably lowered.

**Smoking Temperatures of Frying Mediums.**
Based on work by the American Meat Institute.

| Medium | Smoking Temperature |
|---|---|
| Hydrogenated Fats. | 190°C to 225°C. |
| Compounds. | 194°C to 223°C. |
| Lards - Team-rendered. | 165°C to 225°C. |
| Refined deodorised lard. | 221°C. |
| Kettle-rendered. | 190°C. |
| Oils. | 190°C. |
| Corn. | 208°C. |
| Cottonseed. | 217°C. |

**Frying Temperature Chart**
This chart is intended as a guide only.

| Product | Temperature (°C) | Duration (minutes) |
|---|---|---|
| Chicken - Pieces.<br>- Large Pieces. | 175-185<br>160-170 | 8-10<br>14-16 |
| Chops / Cutlets. | 165-175 | 5-8 |
| Fish Battered / Breaded. | 170-175 | 1-5 |
| Prawns / Shellfish. | 170-175 | 1-5 |
| Doughnuts - Cake type.<br>- Yeast raised. | 185-190<br>175-180 | 2<br>2 |
| Fritters. | 175-185 | 3-5 |
| Vegetables. | 185-190 | 2-3 |
| Potato chips - Blanch.<br>- Fry. | 165<br>190 | 3-4<br>3-4 |
| French Fries - Medium.<br>- Shoe string. | 190<br>190 | 3-4<br>3-4 |

**WARNING:**

**DO NOT USE FLAMMIBLE SOLVENTS AND CLEANING AIDS ON OR IN CLOSE PROXIMITY TO THE FRYER WHILST THE FRYER IS STILL HOT.**

**CAUTION:**

**Always turn 'Off' the gas and electrical supply at the mains supply before cleaning.**
**This appliance is not water proof.**
**Do not use water jet spray to clean interior or exterior of this appliance.**

## General

- To achieve the best results cleaning must be regular and thorough and all controls and mechanical parts checked and adjusted periodically by a qualified service person. If any small faults occur, have them attended to promptly.
- Don't wait until they cause a complete breakdown. It is recommended that the appliance is serviced every 6 months.
- Clean the fryer regularly. A clean fryer looks better, will last longer and will perform better.

**NOTE:**

- **DO NOT use abrasive detergents, sharp scrapers, strong solvents or caustic detergents as they could corrode or damage the fryer.**
- **Ensure that any detergent or cleaning material has been completely removed after each cleaning.**

To keep your fryer clean and operating at peak efficiency, follow the procedures below:-

## Draining and Cleaning

**WARNING:**

**DO NOT ATTEMPT TO MOVE THE FRYER WHILST THE FRYER IS FULL OF OIL.**

**BEFORE ATTEMPTING TO MOVE THE FRYER, ENSURE THAT ALL THE OIL HAS BEEN DRAINED FROM THE TANK. REFER TO THE INFORMATION BELOW ON HOW TO DRAIN THE OIL FROM THE FRYER.**

**CAUTION:**

**Never drain the fryer with power or burners turned 'ON'**
**Always switch 'OFF' the fryer before draining or re-filling the tank.**

### Opening the Drain Valve

a. Lift the locking slide on the valve handle (Fig 7) to release the valve.
b. While holding the locking slide in the withdrawn position, rotate the handle anticlockwise (Fig 8) to open the valve.
c. When the valve is closed, the locking slide will drop down over the locking valve to prevent accidental opening of the valve as shown in Fig.7.

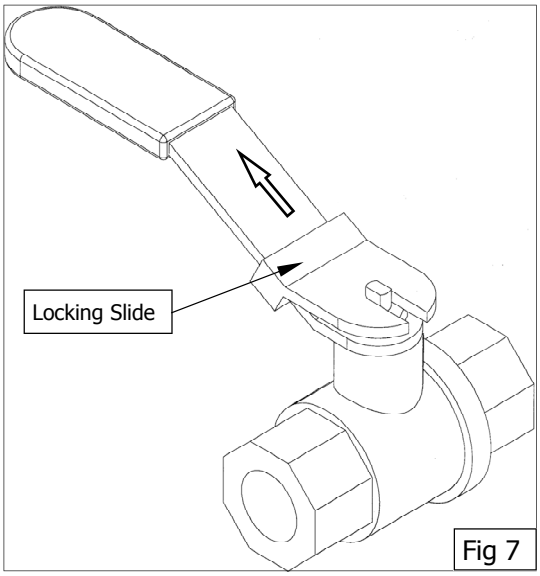


Fig 7

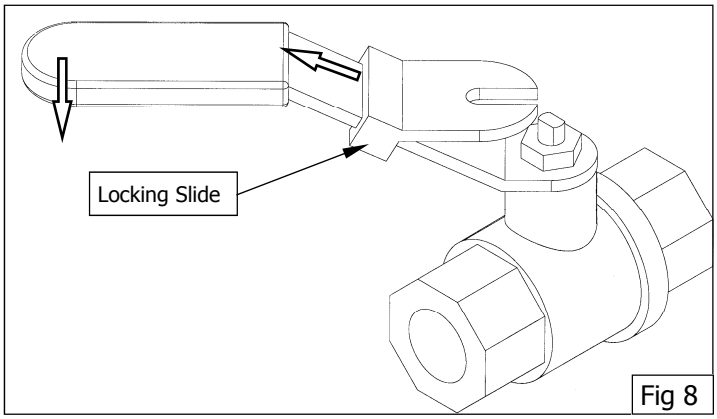


Fig 8

### Daily Cleaning

**WARNING:**

**HOT OIL WILL BURN - DO NOT RUSH THIS JOB.**

1. At the end of each day or at the end of each shift, if the frying schedule is heavy, the frying medium should be drained and filtered into a receptacle.
2. Always filter the fryer when the cool zone under the burners is hot and liquid. A cold fryer heated up won't drain, because the frying medium in this zone will remain hard if using solid fat / oils.
3. Screw the drain extension pipe onto the end of the drain valve and position a suitable container and filter under the drain extension pipe.
4. Do not empty the total contents into one large container, as this will be dangerous and may be difficult when lifted up, to pour the hot oil back into the tank.
5. Alternatively use a Filter-Max.
6. Slip a muslin or other suitable bag over the drain valve. Crumbs will be caught in the bag but frying medium will strain freely through into the receptacle.
7. Open the drain valve slowly to minimise splashing, and take care not to overfill the container.
8. If necessary, use a drain stick to stir up any solid medium into the top medium to melt it.
9. When the tank has been drained, use a ladle or small pan with a handle and dip into the hot frying medium from the receptacle and pour around the sides and bottom of the tank to wash out crumbs and particles adhering to the tank.
10. Continue to dip and pour until all crumbs are washed down and into the filter bag.
11. Open the drain valve fully and check for any particles or crumb residue lodged in the valve. Clean out with a stiff nylon brush. Do not use a wire brush or metal rods as these damage the seating in the valve and will eventually lead to valve leakage. If the obstruction in the valve cannot be removed with a brush, use a wooden probe to dislodge the obstruction.
12. Wipe all exterior panels with a cloth dampened with detergent and rinse off any residue with clean warm water.
13. Clean the Control Panel with a damp cloth lightly moistened with a solution of water and a commercial quality foodservice approved detergent.
14. Once the daily cleaning operation is completed, close the drain valve and pour the frying medium back into the tank and continue the days work.
15. Cleaning the tank takes less time than frying one load of potatoes and will pay dividends in food quality and saving of frying medium.

## Weekly Cleaning

**NOTE: If the fryer usage is very high, we recommend that the weekly cleaning procedure is carried out on a more frequent basis.**

1. Proceed as for 'Daily Cleaning' to drain and filter the tank. Do not refill the tank with frying medium until it has been cleaned as shown below.
2. Fill the fryer with cold water to the normal fill level and add a high quality commercial cleaner that has been specifically formulated for fryers. *All purpose cleaners are not recommended*.

**NOTE: Never use a caustic or lye solution, as this will leave a fat destroying film on the tank.**

3. Heat the water to approximately 80-90°C.
4. Clean the fryer baskets at the same time by simply immersing them in the cleaning solution. Allow the fryer to soak for 5-10 minutes or as directed on the cleaner instructions. Remove the baskets and turn OFF the main burners.
5. Scrub the baskets and fryer tank lightly, but vigorously with a stiff nylon bristle brush to remove any remaining deposits. ***DO NOT use a wire brush, as this will scratch the sides***.
6. Empty the fryer and rinse thoroughly with water. Use a 1 part vinegar to 15 parts water solution to rinse the tank and neutralise any cleaner residue. Use a weaker solution of up to 1 part to 25 water if this proves unsuitable for the cleaner being used.
7. Rinse the tank thoroughly with water, drain and dry.
8. Refill the tank with new filtered frying medium.

**Stainless Steel Surfaces**

a. With the tank(s) drained, cleaned and dried as shown above, clean the exterior surfaces of the fryer with hot water, a mild detergent solution and a soft cloth. Note that the gas control knobs are a push fit onto the gas control valve spindles and can be removed to allow cleaning of the front control panel.
b. Dry all components thoroughly with a dry cloth and polish with a soft dry cloth.
c. To remove any discolouration, use an approved stainless steel cleaner or stainless steel wool. Always rub in the direction of the grain.

## Periodic Maintenance

**WARNING:**

**DO NOT ATTEMPT TO MOVE THE FRYER WHILST THE FRYER IS FULL OF OIL.**

**BEFORE ATTEMPTING TO MOVE THE FRYER, ENSURE THAT ALL THE OIL HAS BEEN DRAINED FROM THE TANK. REFER TO THE INFORMATION ON THE PREVIOUS PAGE ON HOW TO DRAIN THE OIL FROM THE FRYER.**

**NOTE: All maintenance operations should only be carried out by a qualified service person.**

To achieve the best results cleaning must be regular and thorough and all controls and mechanical parts should be checked and adjusted periodically by a qualified service person. If any small faults occur, have them attended to promptly. Don't wait until they cause a complete breakdown. It is recommended that the appliance is serviced every 6 months.

### Guide to Cooking Problems with Fryer

This section provides an easy reference guide to the more common problems that may occur during the operation of your equipment. The fault finding guide in this section is intended to help you correct, or at least accurately diagnose problems with your equipment.

Although this section covers the most common problems reported, you may encounter a problem not covered in this section. In such instances, please contact your local authorised service agent who will make every effort to help you identify and resolve the problem. Please note that the service agent will require the following information:-

- **Model Code and the Serial Number of the appliance can be found on the Rating Plate located on the inside of the access door.**

| Fault | Possible Cause | Remedy |
|---|---|---|
| Frying medium foaming. | Presence of soap or detergent residue from cleaning the tank. | Rinse the fryer thoroughly three times with clean water. Ensure fryer is perfectly dry before re-filling with frying medium. |
| | Excessive breakdown of frying medium. | Add fresh frying medium daily to replace contents every 3-5 days. |
| | Continual frying of food with excess moisture. | Remove excess moisture from foods to be fried. |
| | Continued overheating of oil. | Check setting of the thermostat. Turn down heat to around 120°C (Standby) when use is quiet |
| | Overloading | Maintain 1-8 ratio of food to frying medium. |
| Gumming. | Heating frying medium too rapidly. | When charging fryer or starting up, melt frying medium gradually. |
| | Continued overheating of the frying medium. | Check the thermostat setting by using a 'Mercury In Glass' thermometer or thermocouple. |
| | Frying oil broken down. | Check amount of fresh frying medium added to fryer to be sure 'turnover' is adequate. |
| | Using wrong cooking frying medium. | Some frying mediums form gums when used in a deep fryer. e.g safflower oil. |
| Greasy foods. | Frying at too low temperatures. | Increase temperature and check thermostat setting. |
| | Inadequate preparation of food. | Be sure foods (especially potatoes) are 'cured' correctly. |
| | Excessive quantities of breading or batter. | Remove surplus breading or batter. |
| | Placing food in frying medium direct from the freezer. | Allow frozen foods to thaw before frying. |
| | Surplus moisture in and on surface of food. | Drain and dry foods before frying. |
| | Frying medium in advanced stages of breakdown. | Discard 'old' frying medium and refill the fryer with new medium. |
| | Use of dripping or other unrefined oil. | Due to low smoking point, cooking in these oils at lower temperatures will result in greater oil absorbtion by the food. |
| | Using the wrong kind of cooking oil. | Always use a completely refined and deodorised cooking oil. |

| Fault | Possible Cause | Remedy |
|---|---|---|
| Rapid oil breakdown. | Inadequate frying oil turnover. | Adjust procedures to fry more food in the fryer to increase the turnover. |
| | Overheating of oil. | Check the setting of the thermostat with a 'Mercury In Glass' thermometer or thermocouple. |
| | Contamination. | Filter or strain the oil daily. |
| | Poor cleaning procedures. | Clean the fryer each day or at least once a week and rinse thoroughly. Dry the fryer before use. |
| | Presence of copper or brass in the fryer equipment. | Remove all copper or brass fittings from contact with the oil. |
| | Overloading fryer. | Maintain 1-8 ratio of food to frying oil. |
| | Food excessively moist. | Drain and dry the food before frying. |
| | Overheating oil on 'Standby' mode. | Reduce temperature of frying oil between 93°C during idle ('Standby') periods. |
| Oil smoking. | Insufficient turnover of oil. | Maintain a minimum quantity of oil in the fryer for more rapid turnover or increase the quantity of food fried in the fryer. Replace with fresh oil every 3 to 5 days. |
| | Continual frying with excess moisture on food. | Drain foods before frying, pat food dry. |
| | Contamination of oil. | Filter or strain daily to remove contaminants. |
| | Overheating of oil. | Check the setting of the thermostat with a 'Mercury In Glass' thermometer or thermocouple. |
| | Rapid breakdown of oil. | Use stable frying oil. |
| | Use of unrefined oils. | Dripping smokes at lower temperature than refined and deodorised oils. |
| Darkening of oil. | Presence of salt on the food. | Salt foods after frying and away from the fryer. |
| | Foods dipped in batter high in egg yolk. | Reduce egg content of the batter, replace part egg with milk. |
| | Contamination of oil. | Filter or strain oil daily to remove contaminants. |
| | Poor cleaning practice. | Clean the fryer at least once a week or each day in cases of heavy usage. Ensure fryer is perfectly dry before use. |
| | Overheating of oil. | Check the setting of the thermostat with a 'Mercury In Glass' thermometer or thermocouple. |
| | Insufficient oil turnover. | Top up daily to replace the contents of fryer in 3 to 5 days. |
| | Cooking foods with high sugar levels. | Potatoes at the end of a season are usually high in reduced sugars. When fried, they will darken quickly and colour the oil. |

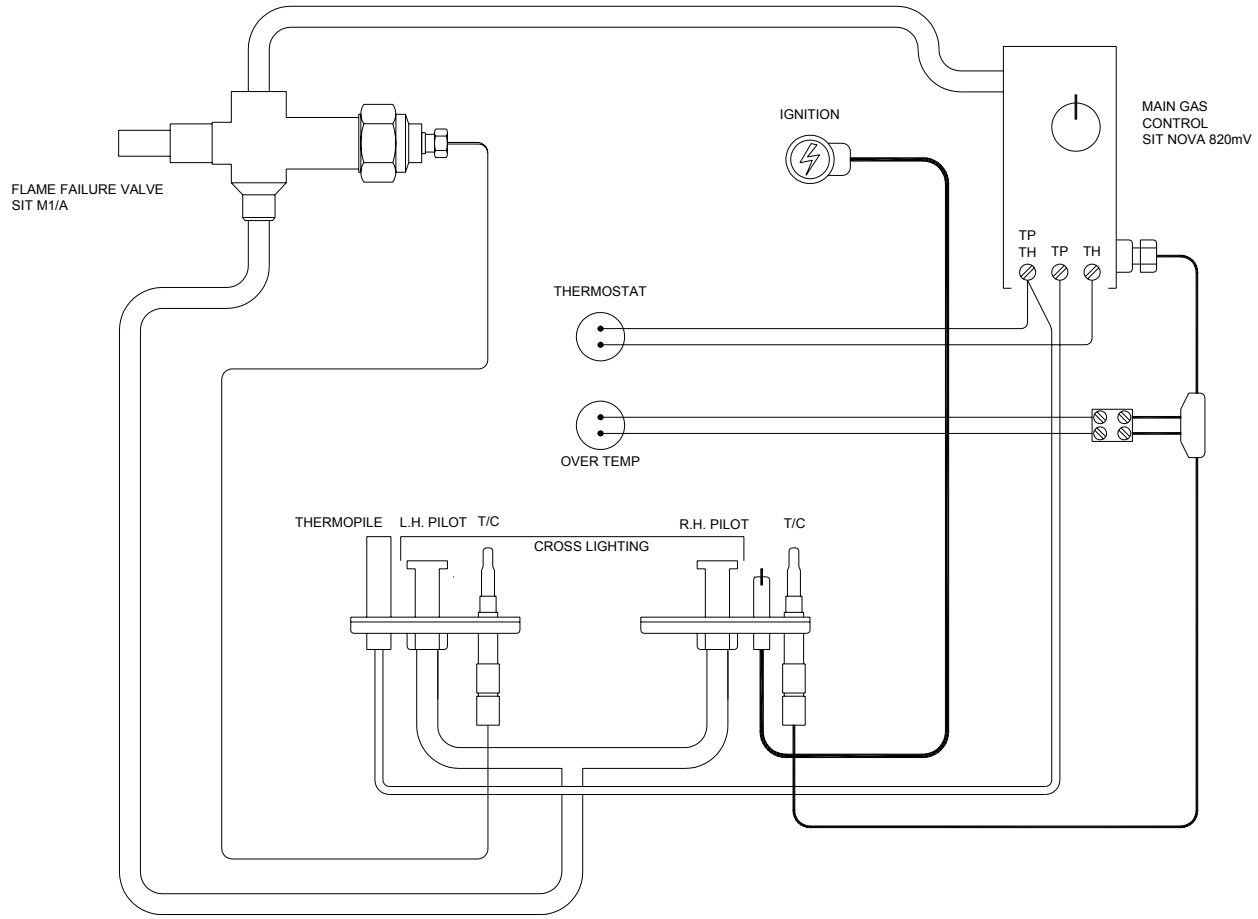
**NOTE: Excessive usage of oil is an indication of high absorption of oil into the food. This is a function of temperature and character of the goods being fried - NOT due to the type of oil being used (unless refined oils are being used). Any variation in the apparent life of the oil is always due to one or more of the causes mentioned above.**

### Fault Finding the Gas System

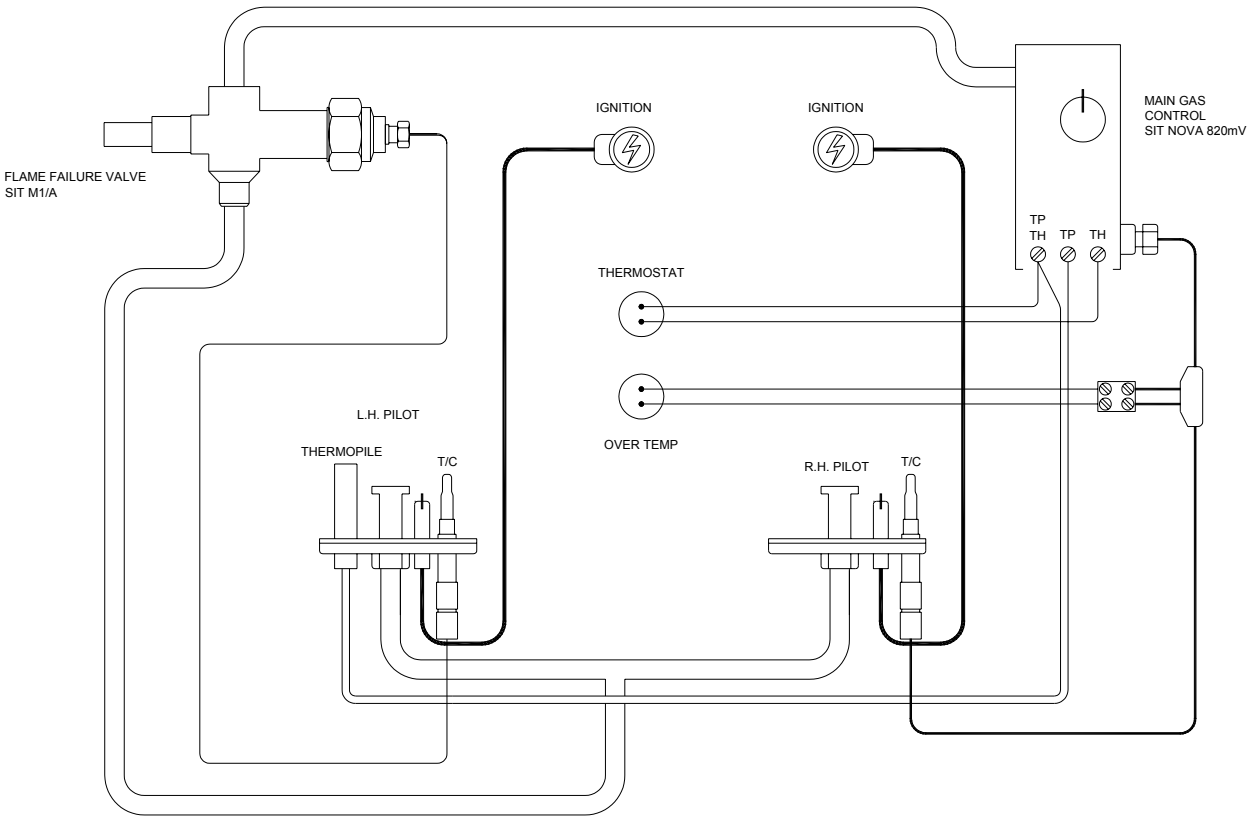
| Fault | Possible Cause | Remedy |
|---|---|---|
| Pilot Burners will not light / stay alight. | Check gas supply is turned on. | Turn on gas supply. |
| | Check gas supply is low or empty. | Replenish gas supply. |
| | Thermocouple connection loose. | Tighten thermocouple connection. Replace any damaged connectors. |
| | Over temperature lead connection to interrupter on thermocouple is loose. Loose connections will cause resistance to millivolt circuit and result in pilot outage. | Tighten over temperature lead to the interrupter on the thermocouple. |
| | If sufficient pilot flame cannot be obtained, remove pilot orifice from pilot burner and check for blockage of the pilot burner and / or correct size. | If connections OK, check for gas at the pilot burner by manually lighting the pilot burner. |
| | If pilot can be lit but flame too small to impinge on the thermocouple. | Check adjustment of pilot flow by adjusting screw below control knob on gas control. Check the supply. |
| | If pilot flame OK but goes out after control knob released (after holding in for approx. 30 secs). | Check for faulty thermocouple or over temperature thermostat. Call service provider. |
| | Check the oil temperature. If above 205°C, the over temperature will be open circuit. | Wait for oil to cool to approximately 190°C and re-light pilot burner. If overtemp is operating OK the pilot should now stay alight. |
| | Check the oil temperature, if the oil is cold, disconnect the thermocouple from the gas control, while holding in the control knob in the pilot position and using a multimeter measure the millivolts being generated between the thermocouple end and earth (place other probe of multimeter on body of gas control). | With the thermocouple hot, millivolt reading should be between 20-30mV. If voltage reading below 15 millivolts the thermocouple is defective. Replace the thermocouple. |
| | If no millivolts generated, disconnect overtemperature thermostat leads from interrupter terminal on thermocouple and check continuity through overtemperature thermostat with multimeter. | If overtemperature thermostat is open circuit it is faulty and needs replacing. If there is continuity through over temperature thermostat then thermocouple is faulty and needs replacement. |
| | If all of the above in the pilot and thermocouple system checks out satis. but the problem still persists. | The gas control valve is defective and needs replacement. |
| Pilot Burner delay in ignition of main burners. | Check operating pressure as stated in 'Installation' section. | Increase by adjusting pilot adjustment screw on gas control. |
| | Check pilot flame adjustment. | Pilot flame for main burner ignition should be approximately 1 inch long. Check pilot burner size is correct. (See 'Specifications' section). |

| Fault | Possible Cause | Remedy |
|---|---|---|
| Over temperature Thermostat cuts out the Pilot Burners. | Overtemperature thermostat is faulty. | If thermostat cutting out pilot when the oil temperature is below 200°C. Replace over temperature thermostat. |
| | Control thermostat not maintaining set temperature. | Control thermostat is out of calibration. Refer to 'Calibration' Procedure. |
| | Thermostat does not open on temperature rise. | Check continuity through thermostat leads on temperature rise. If circuit does not open thermostat. |
| | Thermostat opens on temperature rise but control valve does not respond. | Check connections on gas control are correct. If correct, replace the gas control valve. |
| Main Burners do not light. | Thermopile and thermostat connections to gas control are loose. | Check and tighten connections. |
| | Thermostat setting is incorrect or the gas control knob for the main burner is in the 'Off' position. | Check thermostat setting is correct and gas control knob is in the 'On' position. |
| | Thermostat leads from gas control broken or damaged.<br>Thermostat not working. | Remove thermostat leads from gas control and check continuity through thermostat, i.e. check thermostat is calling for heat.<br>If not check the calibration of the thermostat. |
| | If all are satisfactory, then check the thermopile.<br>To check, disconnect thermopile leads from gas control and measure millivolts generated by thermopile by placing multimeter probes across leads when thermopile heated in pilot flame (500-700mV should be generated). | If low, replace thermopile provided pilot flame impingement on thermopile is good. |
| Main Burners Do Not Burn Correctly. | Burners roar, light back through the mesh to the burner or do not burn the correct colour. | Check the operating pressure is correct.<br>Check Main Burner Injector sizes are correct for the gas type being used. (refer to table in 'Gas Conversion and Specifications' section).<br>Check that flueway and / or primary air intake is not blocked / restricted.<br>Replace the burners. |

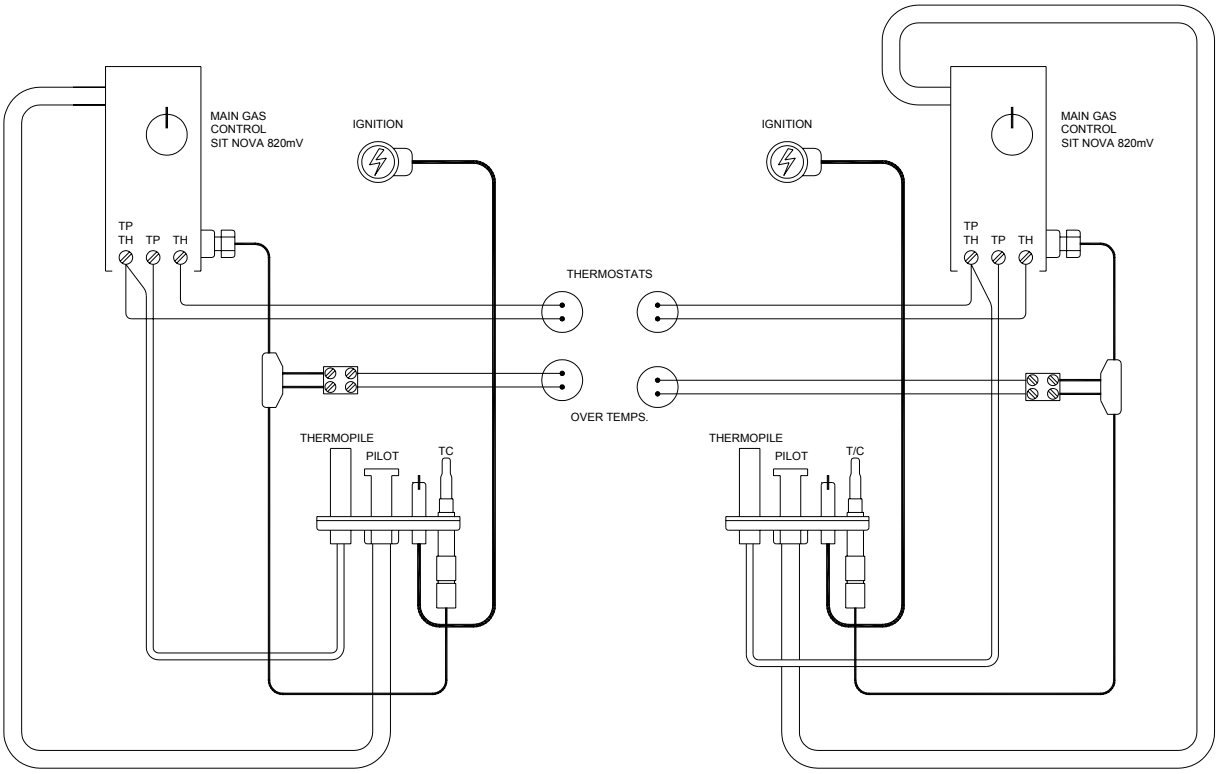
## FN8120G / FNL8120G Fryer - Single Tank




## FN8130G / FNL8130G Fryer - Single Tank



## FN8226G / FNL8226G Fryer - Double Tank



## Conversion Procedure

**CAUTION:**

**Ensure the unit is isolated from the gas supply before commencing servicing.**

**NOTE:**

- **These conversions should only be carried out by qualified service persons. All connections must be checked for leaks before re-commissioning the appliance.**
- **For all relevant information and specifications refer to the table at the end of this section.**

### Flexible Hose Connection;

If a Gas Hose assembly is used to connect this appliance, the hose and all fittings must have a minimum ¾" (Natural Gas) or ½" (LPG) inside bore diameter to ensure gas flow rate capacity required by this appliance is achieved.
This must be verified by the operating pressure testing at the maximum gas supply demand condition.

The Gas Hose assembly should also be classified for use in the commercial kitchen conditions, the appliance will be used in.

Recommended Gas Hose Assembly Specification:
- AS/NZS 1869 Class B or D compliant or equivalent, that meets the following requirements:-

| Class | Max Working Pressure at 23 ± 2ºC | Working Temperature Range | Resistance to Oil |
|---|---|---|---|
| B | 7.0 kPa. | - 20ºC to + 125ºC. | Oil resistant lining and cover. |
| D | 2.6 MPa. | | |

1. Ensure that the gas supply has been turned off.
2. Open the front door of the unit to access the main burner and pilot burner injectors.
3. Connect a manometer to the upper test point (Line Pressure) on the gas control valve located through the access hole in the enamelled control panel. Turn on the gas and ensure that the supply pressure is within the specification shown in the 'Gas Specifications Table' at the end of this section.

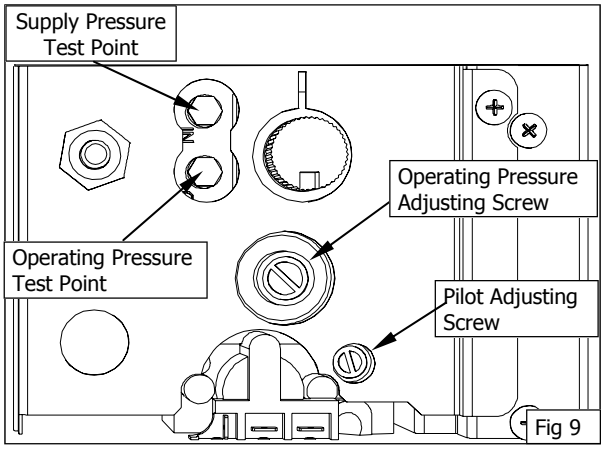


Fig 9

### Main Burner Injectors

1. Unscrew and remove the main burner injectors (12.7 mm A/F) located in front of main burner venturi openings.
2. Determine the correct injectors for the corresponding gas from the 'Gas Specifications Table' at the end of this section.
3. Screw in the correct sized injectors. Refer to the 'Gas Specifications Table' at the end of this section.

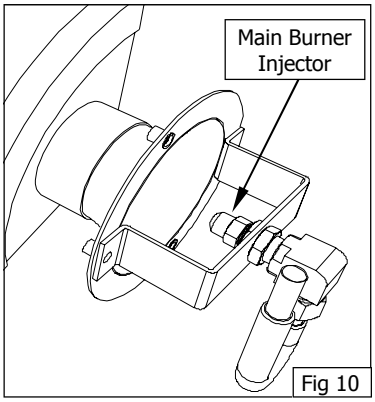


Fig 10

### Pilot Burner Injectors

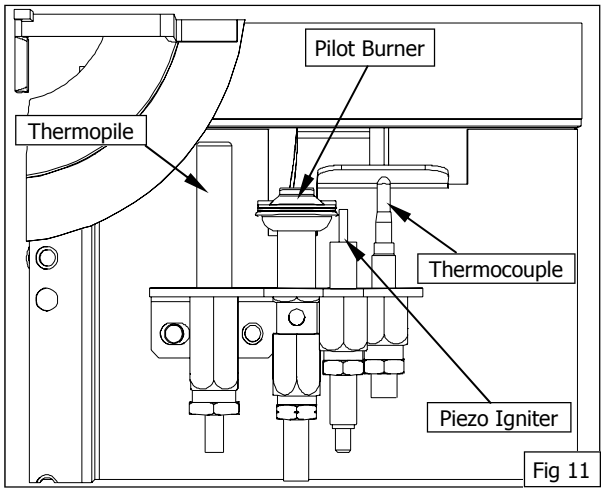


Fig 11

1. Unscrew the pilot supply tube from the pilot burner fitted to the mounting bracket and remove the pilot injector.

**NOTE: On appliances fitted with piezo igniter electrodes, to prevent damage to the electrode, unscrew and remove the electrode from the mounting bracket before unscrewing the pilot supply tube.**

2. Determine the correct sized pilot injectors for the corresponding gas from the table overleaf.
3. Fit the correct sized injector into the pilot burner and re-connect the gas supply tube to the pilot burner.
4. Refit the piezo igniter electrode to the mounting bracket and tighten hand tight.

### Gas Controller

**NOTE: For Twin Tank Fryers only, the units will be fitted with 2 gas controllers. These controllers operate independently of each other. The gas regulators and pilot adjustment will need to be carried out separately for each gas controller.**

#### Main Burner Operating Pressure Adjustment

a. Connect a manometer to the lower test point (Burner Pressure) on the gas control valve located through the access hole in the control panel.
b. Remove the slotted cap located directly below the main gas control knob on the gas control valve, this will reveal an operating pressure adjusting screw.
c. Light the main burners and adjust the adjusting screw to obtain the correct burner pressure for the type of gas being used. Refer to the specification table shown at the end of this section.
d. Refit the slotted cap to the screw adjustment point.

#### Pilot Burner Flame Adjustment

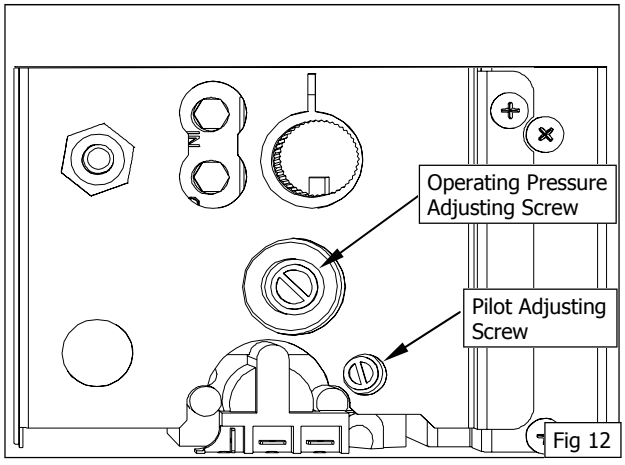


Fig 12

a. Once the main burner operating pressure has been set, the pilot burner supply can be adjusted so that impingement of the pilot flame on the thermocouple and thermopile is correct and the main burner pilot flame ignites the main burners satisfactorily.
b. Adjust the pilot flame size by adjusting the pilot burner adjusting screw on the lower right side of the gas control valve, below the gas control knob.
c. Adjust this screw so that the flame impingement on the thermopile and thermocouple is correct and that the flame of the pilot burner is approximately 1" long for main burner ignition. Anti-clockwise rotation of the adjustment screw will increase the size of the pilot flame.

On completion of the main and pilot burner adjustments, check all gas connections for leakages and then turn off the main burners at the gas control knob. Turn off the main gas supply.

**WARNING:**

**DO NOT USE A NAKED FLAME TO CHECK FOR GAS LEAKAGES.**

### Gas Type Identification Label

On completion of the gas conversion, replace the gas type identification label located at:-

- The rear of the appliance, above the gas connection.
- Beside the rating plate.

### Commissioning

Before leaving the converted installation;

1. Check all gas connections for leakages using soapy water or other gas detecting equipment.

**WARNING:**

**DO NOT USE A NAKED FLAME TO CHECK FOR GAS LEAKAGES.**

2. Check the following functions in accordance with the operating instructions specified in the 'Operation' section of this manual.
   - Light the Pilot Burners.
   - Light the Main Burners.
   - Check the Thermostat operation.
   - Ensure that all the controls operate correctly.

**NOTE: If for some reason it is not possible to get the appliance to operate correctly, shut off the gas supply and contact the supplier of this appliance.**

## Gas Specifications

| | | Natural Gas. (G20) | LP Gas (Propane) (G31) |
|---|---|---|---|
| **Main Burner Injectors** | | Ø 3.10 mm | Ø 1.90 mm |
| **Pilot Burner Injectors** | **Non-UK** | 0.62 | 0.35 |
| | **UK Only** | 0.45 | 0.30 |
| **Pilot Screw Adjustment** | | Full Out (CCW) | 1½ turns out (CCW) |
| **Burner Operating Pressure** | | 0.98 kPa (*) (9.8 mbar) | 2.50 kPa (*) (25 mbar) |
| **Supply Pressure** | **Non-UK** | 1.13 - 2.0 kPa | 2.75 - 3.0 kPa |
| | **UK Only** | 20 mbar | 37 mbar |

**NOTE:**

*** The burner operating pressure is to be measured at the upper test point (Supply Pressure) on the gas control valve located behind the access door and through the access hole in the control panel, this is to be carried out with all burners operating at the 'High Flame' setting. Refer to the 'Gas Conversion and Specification' Section for further details.**

# Replacement Parts List

**IMPORTANT:**

**Only genuine authorized replacement parts should be used for the servicing and repair of this appliance. The instructions supplied with the parts should be followed when replacing components.**
**For further information and servicing instructions, contact your nearest authorized service branch (contact details are as shown on the reverse of the front cover of this manual).**

When ordering spare parts, please quote the part number and the description as listed below. If the part required is not listed below, request the part by description and quote model number and serial number which is shown on the rating plate.

### Controls

| | | | |
|---|---|---|---|
| 018094 | Thermocouple - Main Gas Valve. | | |
| 227865 | Thermocouple - Flame Failure Valve. | (Single Tank Models Only). | |
| 018093 | Thermopile. | | |
| 019237 | Flame Failure Valve. | | |
| 032190 | Main Burner Injector | (LPG) | ø 1.90 mm. |
| 032310 | Main Burner Injector | (Nat Gas) | ø 3.10 mm. |
| 018090K | Pilot Burner | (Includes electrode). | |
| 018092 | Pilot Injector | (LPG) | 0.35. |
| 018091 | Pilot Injector | (Nat Gas) | 0.62. |
| 018972 | Pilot Injector | (LP Gas / Propane-G31) | 0.30 (UK Only). |
| 018091 | Pilot Injector | (Natural Gas-G20) | 0.45 (UK Only). |
| 018089K | Gas Control Kit. | | |
| 018095 | Piezo H.T. Lead. | | |
| 227508 | Piezo Ignitor. | | |
| 022575 | Burner Kit. | | |
| 018145 | Thermostat Knob. | | |
| 018021K | Thermostat. | | |
| 018022K | Overtemperature Thermostat. | | |

### General

| | | |
|---|---|---|
| 018019 | Basket. | |
| 227856 | Door Magnet. | |
| 018358 | Drain Valve. | |
| 018147 | Drain Extension. | |
| 018176 | Drain Stick. | |
| 228576 | Basket Tray | (FN8120G). |
| 228577 | Basket Tray | (FN8226G). |
| 228578 | Basket Tray | (FN8130G). |
| 228761 | Lid c/w Handle | (FN8120G/FN8226G). |
| 228762 | Lid c/w Handle | (FN8130G). |
| 229674 | Rear Roller Assy. | |
| 227850 | Leg Adjustable 150 mm (Flush Stud). | |

## Gas Conversion Kits

| Model | Gas Type to Convert to | | | |
|---|---|---|---|---|
| | Australia / New Zealand Only | | UK Only | |
| | Nat. Gas | LPG | Nat. Gas | LPG |
| FN8120G<br>FN8226G<br>FN8130G | 231963 | 231962 | 231967 | 231966 |

## Accessories (Optional)

| | |
|---|---|
| 228793 | 450 mm (Fryer) Plinth Kit. |
| 228794 | 600 mm (Fryer) Plinth Kit. |